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Observations of Pons's Comet made at the U.S. Naval Observatory, Washington, with the 9-inch Equatorial.

By Commander W. T. Sampson and Prof. E. Frisby.

(*Communicated by the Secretaries.*)

	Washington M.T.	Comet—* Δα	Comet—* Δδ	No. of Comp.	Comet α app.	log. (p×Δ)	Comet δ app.	log. (p×Δ)	Obs.	Comp. Star.
1883.	h m s	m s	′ ″		h m s		° ′ ″			
Sept. 23	8 8 24·5	+0 1·19	− 2 10·3	15·3	16 25 20·93	9·89564	+60 31 56·8	9·72026*n*	S	1
24	11 19 47·3	+4 57·92	− 2 12·9	15·3	16 25 28·49	9·94552	60 16 47·8	0·76095	S	2
26	7 42 33·3	− 31·98	−10 10·6	25·5	16 25 47·71	9·87342	59 52 22·8	9·82982*n*	S	3
26	9 56 0·3	+0 16·86	+ 7 7·4	18·4	16 25 47·07	9·96138	59 51 16·0	0·41280	F*	4
28	8 9 12·4	−2 4·47	− 9 35·9	20·3	16 26 17·22	9·91121	59 26 16·6	9·38115	F	5
30	9 39 24·7	+3 32·05	− 5 24·4	5·1	16 27 5·26	9·94484	58 58 54·6	0·57845	S	6
30	9 50 37·1	+3 32·02	− 5 12·4	5·1	16 27 5·23		58 58 42·6		S	6
Oct. 2	9 30 9·2	+1 39·78	+ 3 46·8	25·5	16 28 2·02	9·30293	58 33 52·3	9·51845*n*	S	7
2	9 30 9·2	+3 12·29	+ 3 19·9	25·5	16 28 2·41		58 33 51·8		S	7
8	7 43 21·6	−0 48·60	+ 6 4·3	25·5	16 32 2·33	9·88741	57 16 55·5	9·73798	S	9
9	7 17 34·7	0 0·00	− 6 27·7	10·2	16 32 50·90	9·87016	57 4 23·3	9·39904	S	9
9	7 24 12·3	0 0·00	− 6 31·6	10·2	16 32 50·90		57 4 19·4		S	9
10	7 22 41·5	−9 20·48	− 7 57·0	15·3	16 33 43·74	9·86011	56 51 49·0	7·65475	S	10
11	7 54 46·7	+8 5·37	−12 44·3	15·3	16 34 39·90	9·89986	56 38 56·5	0·09116	S	11
11	8 6 16·5	+8 6·21	−12 50·3	10·2	16 34 40·74		56 38 50·5		S	11
19	9 3 14·1	−6 37·23	+ 4 45·5	10·2	16 43 45·76	9·90472	55 1 19·7	0·48745	F	12
24	6 52 24·8	+2 7·06	+ 5 20·8	15·3	16 50 49·66	9·84559	54 4 23·8	9·87235	S	13

* Made with 26-in. Equatorial.

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1883.	Washington M.T. h m s	Comet—✻ Δα m s	Comet—✻ Δδ ′ ″	No. of Comp.	Comet α app. h m s	log. (p×Δ)	Comet δ app. ° ′ ″	log. (p×Δ)	Obs.	Comp. Star.
Oct. 24	7 9 40·5	+1 58·15	− 9 57·3	15·3	16 50 52·28	9·85554	+54 3 58·0	9·99734	S	14
24	7 43 13·8	+2 8·19	− 6 51·0	15·3	16 50 55·44	9·88111	54 3 43·4	0·28026	S	15
26	7 9 43·0	−4 36·67	−10 50·6	25·5	16 54 4·86	9·85996	53 41 9·2	9·51435	S	16
27	7 24 50·3	−5 30·99	+ 6 1·3	20·4	16 55 47·79	9·73856	53 29 48·1	0·25273	S	17
29	9 10 27·2	+2 2·91	− 6 46·3	25·5	16 59 27·40	9·87621	53 6 25·0	0·63868	S	18
30	6 45 21·5	−3 36·47	+ 6 10·5	20·4	17 1 5·93		52 56 31·7		F	19
30	6 45 21·5	−5 5·84	+ 9 20·4	11·3	17 1 5·68		52 56 29·7		F	20
30	6 45 21·5	−5 28·43	+ 3 15·3	10·4	17 1 6·65	9·83976	52 56 31·1	0·00232	F	21
30	7 27 59·8	+2 38·29	+ 9 33·3	15·3	17 1 10·82		52 56 12·9		S	22
31	7 20 16·9	−1 38·18	− 5 15·5	15·2	17 3 4·19		52 45 5·6		F	19
31	7 20 16·9	−3 7·77	− 2 58·9	14·2	17 3 3·73		52 45 10·3		F	20
31	7 20 16·9	−3 31·13	− 8 10·2	9·2	17 3 4·11	9·86293	52 45 5·5	0·27512	F	21
31	7 49 19·2	+4 32·39	− 1 50·6	10·2	17 3 4·89		52 44 48·8		S	22
Nov. 1	8 13 14·8	+2 24·60	+ 2 45·2	20·4	17 5 4·43	9·87821	52 33 42·4	0·50105	S	23
1	8 13 14·8	−0 11·65	+ 5 17·2	20·4	17 5 4·80	9·87821	52 33 42·2	0·50108	S	24
3	8 23 28·3	−1 46·64	−14 59·7	20·4	17 9 10·03	9·87485	52 11 33·5	0·54866	S	25
4	7 11 11·0	−2 1·52	+ 5 2·2	20·4	17 11 11·40	9·85598	52 1 26·8	0·27695	S	26
5	7 12 20·8	−4 20·30	+11 38·7	15·3	17 13 22·43	9·85560	51 50 33·2	0·29402	F	27
9	7 18 43·8	−4 8·48	− 4 39·7	10·2	17 22 42·53		51 6 47·0		S	28
9	7 18 43·8	−3 25·84	− 8 53·8	10·2	17 22 42·96	9·85479	51 6 51·2	0·36871	S	29

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1883.	Washington M.T.	Comet—✱ Δα	Comet—✱ Δδ	No. of Comp.	Comet α app.	log. (p×Δ)	Comet δ app.	log. (p×Δ)	Obs.	Comp. Star.
	h m s	m s	′ ″		h m s		° ′ ″			
Nov. 10	7 27 47·3	−0 55·61	− 2 7·7	15·3	17 25 13·17	9·85690	+50 55 49·4	0·41411	S	29
12	7 10 48·8	+1 1·15	+ 5 33·5	25·5	17 30 21·15	9·85098	50 34 15·1	0·39056	F	3
12	7 21 47·4	+0 1·88	− 2 42·0	15·3	17 30 22·67	9·85208	50 33 58·0	0·40286	F	31
12	7 48 38·8	+3 41·21	− 6 15·3	15·3	17 30 26·64	9·85862	50 33 48·3	0·50127	S	32
14	5 51 28·4	−2 25·86	+ 9 0·5	20·4	17 35 41·97	9·78291	50 12 41·5	9·84613	S	33
14	7 7 34·3	−6 11·46	+ 6 22·0	15·3	17 35 50·59	9·84441	50 12 8·6	0·36478	S	34
14	7 7 34·3	−4 58·75	+ 5 35·9	15·3	17 35 51·56	9·84439	50 12 7·2	0·36473	S	35
15	5 49 33·9	−3 31·09	− 4 25·0	15·3	17 38 30·96	9·78037	50 1 21·4	9·84912	S	34
15	5 49 33·9	−2 18·38	− 5 7·4	15·3	17 38 31·91	9·78035	50 1 23·4	9·84888	S	35
15	7 23 55·6	+0 33·66	− 3 1·3	20·4	17 38 41·44	9·84870	50 0 39·5	0·43837	F	33
15	7 41 19·5	−1 49·28	+ 4 27·4	15·3	17 38 44·67	9·85316	50 0 35·2	0·51666	F	36
16	6 26 11·8	+0 54·84	− 6 21·1	15·3	17 41 28·77	9·81964	49 49 46·5	0·19851	F	36
16	6 36 23·5	−2 2·92	+ 2 25·3	15·3	17 41 31·80	9·82423	49 49 49·5	0·23341	S	37
17	6 33 45·4	+0 56·44	− 9 11·0	15·3	17 44 31·15	9·82128	49 38 12·9	0·22918	S	37
18	7 32 18·0	−1 11·16	+ 7 51·0	20·4	17 47 43·11	9·84687	49 26 16·6	0·48177	S	38
19	5 51 54·6	+1 45·09	− 3 13·3	20·4	17 50 39·35	9·78054	49 15 11·8	9·95965	S	38
19	6 9 53·1	−2 56·69	+ 4 50·4	20·4	17 50 41·19	9·79928	49 15 2·6	0·10411	S	39
27	5 46 59·1	+0 3·95	− 0 25·5	25·5	18 19 6·02	9·76351	47 30 24·8	0·03048	S	40
27	6 1 7·5	+0 5·98	− 0 28·5	20·4	18 19 7·93	9·77887	47 30 21·9	0·12947	F	40
27	7 13 17·8	+0 18·39	− 1 22·4	20·4	18 19 20·45	9·82614	47 29 27·8	0·44808	S	40
28	5 44 1·7	−0 43·54	− 2 31·1	25·5	18 23 6·27	9·75792	47 15 38·8	0·01931	S	41
30	7 34 31·4	−2 59·98	− 0 4·6	25·5	18 31 45·94	9·82085	46 42 40·7	0·52792	F	42

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Assumed Mean Places of Comparison Stars.

Star.	α 1883·0.	δ 1883·0.	Authority.
	h m s	° ′ ″	
1	16 23 13·67	+60 34 2·4	Bonn
2	16 20 31·19	60 18 43·4	Lal. Fed.
3	16 26 20·28	60 2 15·8	$\frac{\text{O. Arg. N.} + \text{Bonn}}{2}$
4	16 25 30·79	59 43 51·1	Bonn
5	16 28 22·29	59 35 35·0	O. Arg. N.
6	16 23 33·87	59 3 38·4	„
7	16 26 22·88	58 29 48·8	„
8	16 24 50·77	58 30 15·4	„
9	16 32 51·57	57 10 34·8	„
10	16 43 4·80	56 59 28·5	Berliner Jahrbuch
11	16 26 35·40	56 51 39·4	O. Arg. N.
12	16 50 23·58	54 56 17·7	„
13	16 48 43·22	53 58 48·0	„
14	16 48 54·77	54 13 40·2	„
15	16 48 47·89	54 10 17·4	„
16	16 58 42·12	53 51 43·9	„
17	17 1 19·40	53 23 31·4	„
18	16 57 25·10	53 12 56·3	Bonn
19	17 4 42·93	52 50 5·4	$\frac{\text{Bonn} + \text{Rümker}}{2}$
20	17 6 12·05	52 46 53·3	Bonn
21	17 6 35·62	52 52 59·7	„
22	16 58 33·10	52 46 24·6	O. Arg. N.
23	17 2 40·37	52 30 42·1	Bonn
24	17 5 16·99	52 28 9·5	O. Arg. N.
25	17 10 57·22	52 26 17·3	„
26	17 13 13·41	51 56 8·7	Lalande
27	17 17 43·18	51 38 38·2	Bonn
28	17 26 51·44	51 11 10·3	O. Arg. N.
29	17 26 9·21	50 57 41·0	Struve
30	17 29 20·40	50 28 25·5	Bonn
31	17 30 21·19	50 36 23·8	„
32	17 26 45·86	50 39 47·9	O. Arg. N.
33*	17 38 8·16	50 3 24·2	„

* Argelander's Declination for this star has been increased by 1 micrometer rev. = 47″·2.

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Star.	α 1883·0.	δ 1883·0.	Authority.
	h m s	° ′ ″	
34	17 42 2·36	+50 5 29·1	O. Arg. N.
35	17 40 50·62	50 6 13·7	,,
36	17 40 34·25	49 55 50·8	,,
37	17 43 35·02	49 47 6·9	,,
38	17 48 54·51	49 18 8·0	,,
39	17 53 38·09	49 9 54·4	Bonn
40	18 19 2·06	47 30 31·0	O. Arg. N.
41	18 23 49·77	47 17 50·2	,,
42	18 34 45·80	46 42 24·6	,,

Comparison of Observations with Ephemeris.

Date.	Obs.—Comp.		Date.	Obs.—Comp.		Date.	Obs.—Comp.	
	Δα	Δδ		Δα	Δδ		Δα	Δδ
	s	″		s	″		s	″
Nov. 1	−0·06	+20·0	Nov. 12	+1·60	+13·6	Nov. 17	+2·62	+14·7
,, 1	+0·26	+19·8	,, 14	+2·76	+16·7	,, 18	+2·82	+25·9
,, 3	+0·26	+11·4	,, 14	+1·14	+16·1	,, 19	+2·58	+18·7
,, 4	+0·73	+26·9	,, 14	+2·75	+24·5	,, 19	+2·16	+17·9
,, 5	+0·94	+27·5	,, 15	+1·90	+13·4	,, 27	+4·11	+ 9·4
,, 9	+0·96	+14·8	,, 15	+3·72	+28·8	,, 27	+3·72	+15·3
,, 9	+1·48	+17·6	,, 15	+3·15	+15·4	,, 27	+4·57	+ 6·6
,, 10	+1·20	+12·6	,, 15	+2·43	+20·7	,, 28	+4·03	+15·6
,, 12	+0·32	+24·1	,, 16	+0·61	+16·4	,, 30	+5·57	+ 9·3
,, 12	+0·60	+12·0	,, 16	+2·39	+23·6			

Unfavourable weather prevented the comet being seen before Sept. 23. On that evening I was surprised at its brightness, as it had been described as a faint object. The light was a bright yellow, without showing any decided nucleus. On the 24th the appearance was much the same as on the previous evening. On the 25th it was not seen. On the 26th its appearance had changed in a most marked manner. It was much fainter, and the light had lost its yellow colour.

Observations of Comet b, 1883 (Pons-Brooks), made at the Royal Observatory, Greenwich.

(*Communicated by the Astronomer Royal.*)

The observations were made with the East or Sheepshanks Equatorial (aperture 6·7 inches) by taking transits over two cross-wires at right angles to each other, and each inclined 45° to the parallel of declination.